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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.    | CONFIRMATION NO. |
|---|-------------|----------------------|------------------------|------------------|
| 10/618,411  | 07/11/2003  | Hwa Liang Ng         | STL11012.00            | 5543             |
| 7590 09/26/2005   |             |                      | EXAMINER               |                  |
| Jennifer M Buenzow<br>Seagate Technology LLC<br>Intellectual Property Dept SHK2LG<br>1280 Disc Drive<br>Shakopee, MN 55379-1863 |             |                      | ROSENBERGER, RICHARD A |                  |
|   |             |                      | ART UNIT               | PAPER NUMBER     |
|   |             |                      | 2877                   |                  |
| DATE MAILED: 09/26/2005   |             |                      |                        |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/618,411             | NG ET AL.           |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Richard A. Rosenberger | 2877                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07/11/2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    - a) ☐ All    b) ☐ Some \* c) ☐ None of:
      - 1. ☐ Certified copies of the priority documents have been received.
      - 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
      - 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>07/11/2003</u> . | 6) <input type="checkbox"/> Other: _____  |

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1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosoi et al (US 4,132,112).

As to claims 1, 12 and 22, the reference teaches placing a film between two contacting surfaces; an example in the reference is two calendar rolls, (column 13, lines 22-25), which provide compressive force to generate a pressure pattern, removing the film (column 13, lines 26-27), and sensing an optical property of the film to derive a sensed pressure pattern (column 13, lines 27-30). The thus-measured pressure pattern can be used to adjust the device providing the pressure (column 13, lines 42-46). Although the reference does not specifically state that the pressure can be adjusted in a device in which the pressure is adjusted by "a stored setting", it would have been obvious to use this general technique with any type of device in which pressure needs to be measured and adjusted; the manner in which the pressure is adjusted is of no particular relevance to the general method of measuring using such a film and a sensor such as a densitometer, and using the sensed pressure pattern to adjust the device.

As in claim 2, 13 and 25, the reference teaches the pattern can be sensed by a densitometer (column 13, line 28).

As in claims 3 and 14; the thickness of the film could be chosen to be appropriate for the particular application at hand. The reference notes that the thicknesses of the various parts of the

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film can be as small as on order of tens of microns; the support can be as thin and about 10 microns (column 6, lines 37-38), the protective layer as thin as 5 microns (column 9, lines 26-27), with the microparticles in the recording layer being as small as less than 1 micron (as small as 0.1 micron in claims 4 and 11, and 0.5 microns in claims 5 and 12 of the reference); Thus the instant claimed less than 120 micrometers is well within the thickness range taught as possible for the layer in the reference.

Claims 4-11, 15-21 and 23-24 set forth different possible uses for the instant disclosed method and apparatus. The reference presents the arrangement therein as a general purpose system (see column 1, lines 16-38) for a statement of the context of the invention, including a list of many various uses for pressure measurement; including "checking of the effective limit and the state of effectiveness of gasket seals (column 1, lines 26-28). This at least suggests that the pressure measurement of the reference can be used in such a variety of systems. It would have been obvious to use such a pressure sensitive film and densitometer arrangement to measure, and correct as needed, the pressure in any system in which the film can reasonably be placed and removed to determine the pressure distribution.

3. From the specification, it appears that the film itself is a commercially available product (see, for example, page 7, lines 17-19), which apparently includes commercially available films in the claimed "less than 120 micrometers" range of instant claims 3 and 14.

4. Bohn (US 6,512,387) shows the use of such a film to measure the quality of connections in electronic devices.

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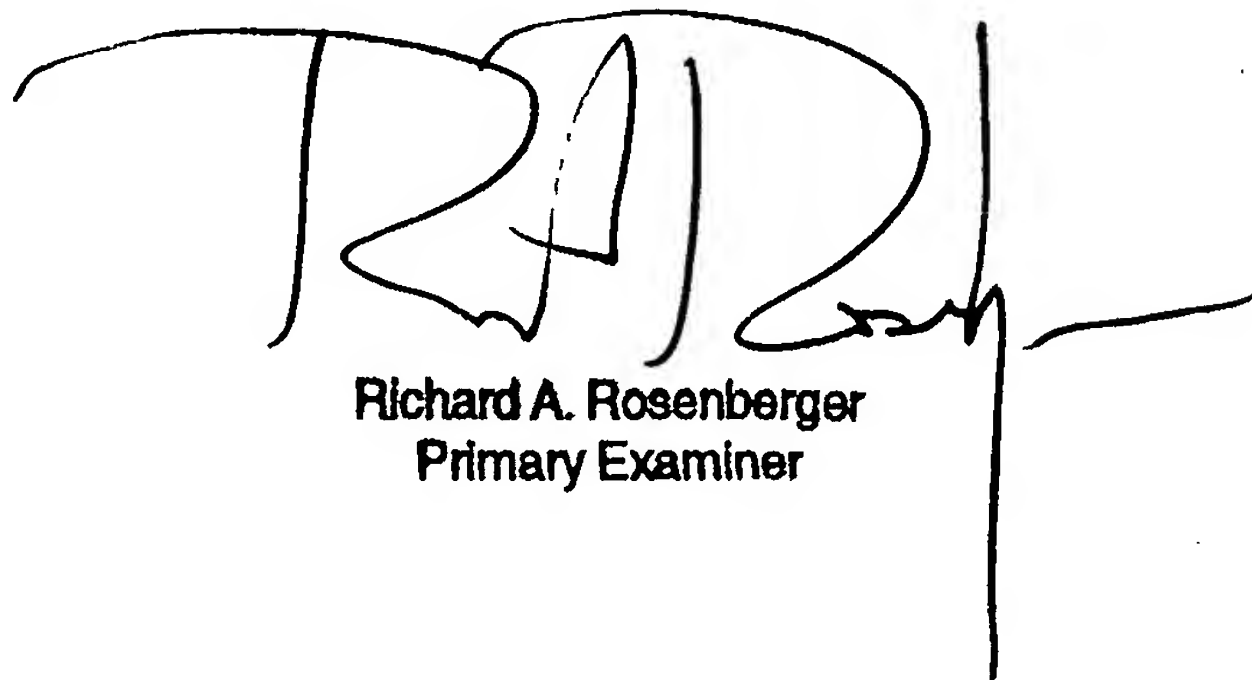
Szweda, Roy "Tactile sensor interprets stress distribution and magnitude in O-rings and gaskets, *Sealing Technology*, Volume 2001, Issue 90, June 2001, pages 6-7, shows a similar system which uses a pressure sensitive film and an imaging system to measure the pressure distribution between two surfaces; the reference states that the system can be used "between any two surfaces that will touch, mate, or impact" (page 6, column 3, lines 25-27), and discusses that it "can be used to analyze flange and gasket interface pressure profiling ..." (page 7, column 2, lines 9-10), note also the gasket image in figure 12 on page 7. See also the disclosure of "validation and calibration of sealing die pressure ..." (page 6, column 3, lines 11-14).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard A Rosenberger whose telephone number is (571) 272-2428. The examiner can normally be reached on Monday through Friday during the hours of 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory J. Toatley, Jr. can be reached on (571) 272-2800 ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

R. A. Rosenberger  
20 September 2005



Richard A. Rosenberger  
Primary Examiner